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Title V Operating Permit

PERMIT NUMBER: 4900082001

DATE OF PERMIT: June 24, 1999

Date of Last Revision: April 11, 2003

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Permitted Location:

Geneva Nitrogen Inc.
1165 N 1600 W
Vineyard, UT 84057

Geneva Nitrogen Plant
1165 North 1600 West
Orem, UT 84057

UTM coordinates: 4,463,352 meters Northing, 437,470 meters Easting
SIC code: 2873

ABSTRACT

Geneva Nitrogen LLC Nitrogen Plant consists of the administration building, maintenance shop, laboratory and ammonium nitrate production facilities. The laboratory is leased to another company. There are three manufacturing processes: nitric acid manufacturing, ammonium nitrate solution manufacturing, and solid ammonium nitrate manufacturing. The main emission units are two nitric acid plants, one prill tower, two prill dryer vents, and two prill cooler vents. Geneva Nitrogen LLC Nitrogen Plant is a major source of NO_x and PM₁₀.

UTAH AIR QUALITY BOARD

By:

Prepared By:

Richard W. Sprott, Executive Secretary

Jennifer He

Operating Permit History

6/24/1999 - Permit issued	Action initiated by an initial operating permit application	
4/11/2003 -Permit modified	Action initiated by an administrative amendment (initiated by DAQ)	due to issuance of AO DAQE-AN0825004-03, for removing the 90% reduction requirement for the NO _x abatement systems installed in the Montecatini and Weatherly nitric acid plants, deleting emission unit Prill Coating and Handling due to the modification of process, and deleting PM ₁₀ limit on Predryer Vent, Dryer Vent, Cooler Vent, and 4th Scrubber Vent. In addition, the new SIP (dated July 3, 2003) requirements are included in the permit.

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: General Provisions

I.A. Federal Enforcement.

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. Permitted Activity(ies).

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. Duty to Comply.

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay

any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. Permit Expiration and Renewal.

I.D.1 **This permit is issued for a fixed term of five years and expires on June 24, 2004.** (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by June 24, 2003. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. Application Shield.

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. Severability.

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. Permit Fee.

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. No Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. Revision Exception.

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. Inspection and Entry.

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. Certification.

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. Compliance Certification.

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than **March 31, 2000** and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such

methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

- I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and
- I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.
- I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. Permit Shield.

- I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:
- I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))
- I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))
- I.M.2 Nothing in this permit shall alter or affect any of the following:
- I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))
- I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))
- I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N. Emergency Provision.

I.N.1 An “emergency” is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. Operational Flexibility.

Operational flexibility is governed by R307-415-7d(1).

I.P. Off-permit Changes.

Off-permit changes are governed by R307-415-7d(2).

I.Q. Administrative Permit Amendments.

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i))

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 14 days.** Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and
Environmental Justice (mail code 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

For reports, notifications, or other correspondence
related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII
Office of Partnerships & Regulatory Assistance
Air & Radiation Program (mail code 8P-AR)
999 18th Street, Suite 300
Denver, CO 80202-2466
Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. **Inventory Requirements.**

I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

I.U.3 An emission statement shall be submitted in accordance with the procedures in R307-158, Emission Statement Inventory. (R307-158)

Section II: SPECIAL PROVISIONS

II.A. Emission Unit(s) Permitted to Discharge Air Contaminants.

(R307-415-4(3)(a) and R307-415-4(4))

- II.A.1 **Montecatini Nitric Acid Plant** (designated as Emission unit #1)
Unit Description: Weak nitric acid (HNO₃) production plant equipped with a low temperature selective catalytic reduction (SCR) unit for controlling NO_x emissions.
- II.A.2 **Weatherly Nitric Acid Plant** (designated as Emission unit #2)
Unit Description: Weak HNO₃ production plant equipped with a low temperature selective catalytic reduction (SCR) unit for controlling NO_x emissions.
- II.A.3 **Nitric Acid Plant Group** (designated as Emission unit #3)
Unit Description: Includes the Montecatini Nitric Acid Plant and the Weatherly Nitric Acid Plant.
- II.A.4 **Prill Tower** (designated as Emission unit #4)
Unit Description: Low density prill production unit with no emission control equipment. The uncontrolled prill tower is the major source of ammonium nitrate (NH₄NO₃) particulate matter.
- II.A.5 **Prill Predryer** (designated as Emission unit #5)
Unit Description: Prill predryer vent equipped with a cyclone wet scrubber for controlling solid ammonium nitrate TSP and PM₁₀ emissions. No unit-specific applicable requirements.
- II.A.6 **Prill Dryer** (designated as Emission unit #6)
Unit Description: Prill dryer vent equipped with a cyclone wet scrubber for controlling solid ammonium nitrate TSP and PM₁₀ emissions. No unit-specific applicable requirements.
- II.A.7 **Prill Precooler** (designated as Emission unit #7)
Unit Description: Prill precooler vent equipped with a cyclone wet scrubber for controlling solid ammonium nitrate TSP and PM₁₀ emissions. No unit-specific applicable requirements.
- II.A.8 **Prill Cooler** (designated as Emission unit #8)
Unit Description: Prill cooler vent equipped with a cyclone wet scrubber for controlling solid ammonium nitrate TSP and PM₁₀ emissions. No unit-specific applicable requirements.
- II.A.9 **NH₄NO₃ Solidification Process Units** (designated as Emission unit #9)
Unit Description: Includes Prill Tower, Prill Predryer, Dryer, Precooler, Cooler.
- II.A.10 **Boiler** (designated as Emission unit #10)
Unit Description: Natural gas boiler (14.6 MM Btu/hr) for acid plants startup when steam from Geneva Steel is not available.
- II.A.11 **Evaporative Cooling Tower and Substation** (designated as Emission unit #11)
Unit Description: Used for non-contact cooling of all process equipment. No unit-specific applicable requirements.
- II.A.12 **Evaporative Reactor** (designated as Emission unit #12)
Unit Description: Used for evaporating ammonium nitrate solution to produce melt ammonium nitrate. No unit-specific applicable requirements.
- II.A.13 **Ammonium Nitrate Storage Warehouse Building** (designated as Emission unit #13)
Unit Description: Ammonium nitrate storage, loading, and transferring. No unit-specific applicable requirements.

- II.A.14 **Maintenance Shop** (designated as Emission unit #14)
Unit Description: Used for Stoddard solvent parts washer, drill presses, milling machines, and pipe threading operations. No unit-specific applicable requirements.
- II.A.15 **Storage Area** (designated as Emission unit #15)
Unit Description: Used for oil, solvent, oil drums, Stoddard solvent, and gasoline storage (2-gallon can). No unit-specific applicable requirements.
- II.A.16 **Fuel Dispensing Area** (designated as Emission unit #16)
Unit Description: The fuel dispensing area contains one 500 gallon above ground storage tank for diesel. No unit-specific applicable requirements.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide)**

II.B.1.a **Condition:**

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-6(1) [BACT] & R307-401-5; condition originated in DAQE-AN0825004-03]

II.B.1.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.a.2 **Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b **Condition:**

A Risk Management Plan (RMP) developed in accordance with 40 CFR Part 68 shall be submitted to the United States Environmental Protection Agency not later than the applicable date in 40 CFR 68. [Authority granted under 40 CFR 68; condition originated in 40 CFR Part 68]

II.B.1.b.1 **Monitoring:**

A copy of the Risk Management Plan shall be available upon request along with a copy of the transmittal letter to EPA.

II.B.1.b.2

Recordkeeping:

A copy of the Risk Management Plan shall be available to the Executive Secretary upon request along with a copy of the transmittal letter to EPA.

II.B.1.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.c

Condition:

Visible emissions shall be no greater than 10 percent opacity except as specified elsewhere in this permit. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]

II.B.1.c.1

Monitoring:

A visual opacity survey of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 for point sources, and in accordance with 58 FR 61640 Method 203C for fugitive emission sources.

II.B.1.c.2

Recordkeeping:

A log of the visual opacity survey(s) shall be maintained in accordance with Provision I.S.1 of this permit. If an opacity determination is indicated, a notation of the determination will be made in the log. All data required by 40 CFR 60, Appendix A, Method 9 or 58 FR 61640, Method 203C shall also be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.c.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.d

Condition:

The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Authority granted under 40 CFR 82.150(b); condition originated in 40 CFR Part 82]

II.B.1.d.1

Monitoring:

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.d.2

Recordkeeping:

All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.d.3

Reporting:

All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.2

Conditions on Montecatini Nitric Acid Plant (Emission unit #1)

II.B.2.a

Condition:

Emissions of NO_x shall be no greater than 32.4 lbs/hour and 267 ppmdv. [Authority granted under Utah SIP Section IX.H.1.b.A and R307-401-6(1) [BACT]; condition originated in DAQE-AN0825004-03]

II.B.2.a.1

Monitoring:

Stack testing shall be performed as specified below:

- (a) Testing and Frequency. Emissions shall be tested every two years. The source may also be tested at any time if directed by the Executive Secretary.
- (b) Notification. The applicant shall provide a notification of the test date at least 30 days before the test. A pretest conference shall be held, if directed by the Executive Secretary, between the owner/operator, the tester, and the Executive Secretary.
- (c) Methods.
 - (1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.
 - (2) 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E shall be used to determine the pollutant emission rate.
 - (3) 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.
- (d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.
- (e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

In addition to the stack testing indicated above, the permittee shall monitor the NO_x emissions concentrations (ppmdv) using the NO_x monitoring system. The data generated from the NO_x monitoring system shall be averaged on hourly basis and will be used as periodic monitoring data. The permittee shall calibrate,

maintain, and operate the NO_x monitoring system according to the vendor's specifications.

II.B.2.a.2

Recordkeeping:

Results of all stack testing and periodic NO_x monitoring system data shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.2.a.3

Reporting:

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3

Conditions on Weatherly Nitric Acid Plant (Emission unit #2)

II.B.3.a

Condition:

Emissions of NO_x shall be no greater than 19.4 lbs/hour and 438 ppm_{dv}. [Authority granted under Utah SIP Section IX.H.1.b.A and R307-401-6(1) [BACT]; condition originated in DAQE-AN0825004-03]

II.B.3.a.1

Monitoring:

Stack testing shall be performed as specified below:

(a) Testing and Frequency. Emissions shall be tested every three years. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. The applicant shall provide a notification of the test date at least 30 days before the test. A pretest conference shall be held, if directed by the Executive Secretary, between the owner/operator, the tester, and the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E shall be used to determine the pollutant emission rate.

(3) 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

In addition to the stack testing indicated above, the permittee shall monitor the NO_x emissions concentrations (ppmdv) using the NO_x monitoring system. The data generated from the NO_x monitoring system shall be averaged on hourly basis and will be used as periodic monitoring data. The permittee shall calibrate, maintain, and operate the NO_x monitoring system according to the vendor's specifications.

II.B.3.a.2

Recordkeeping:

Results of all stack testing and periodic NO_x monitoring system data shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.a.3

Reporting:

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4

Conditions on Nitric Acid Plant Group (Emission unit #3)

II.B.4.a

Condition:

Production of Nitric Acid shall be no greater than 13.5 tons per hour based on 100% acid. [Authority granted under R307- 401- 6(1) [BACT]; condition originated in DAQE-AN0825004-03]

II.B.4.a.1

Monitoring:

Hourly nitric acid production rate shall be determined on daily basis by the following formula:

Nitric acid production during each day (tons) divided by operating hours during each day (hours)

Nitric acid production shall be determined by plant records, which include the amount of nitric acid produced and the concentration of nitric acid.

II.B.4.a.2

Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.a.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b

Condition:

Production of Nitric Acid shall be no greater than 113400 tons per rolling 12 month total based on 100% acid. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]

II.B.4.b.1

Monitoring:

The daily production rates shall be recorded and the total production rates shall be summarized for each calendar month. Within the first 15 days of each month, a new 12-month total shall be calculated using data from the previous 12 months.

II.B.4.b.2

Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c

Condition:

Hours of operation shall be no greater than 8640 per 12 month rolling period for each affected emission unit. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]

II.B.4.c.1

Monitoring:

Compliance shall be determined on a rolling 12-month total for each emission unit. The total shall be calculated for each calendar month. Within the first 15 days of each month, a new 12-month total shall be calculated using data from the previous 12 months. The records shall be kept on a daily basis. Hours of operation shall be determined by supervisors monitoring and maintaining of an operations log.

II.B.4.c.2

Recordkeeping:

A log recording all hours of operation for each emission unit shall be maintained. The log shall include the results of required monitoring.

II.B.4.c.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5

Conditions on Prill Tower (Emission unit #4)

II.B.5.a

Condition:

Emissions of PM₁₀ shall be no greater than 0.24 tons/day and 86 tons/year. [Authority granted under SIP condition IX.H.1.b.A.1.C (dated July 3, 2002); condition originated in SIP condition IX.H.1.b..A.1.C (dated July 3, 2002)]

II.B.5.a.1

Monitoring:

(1) Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every three years, based on the date of the most recent stack test. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. Method 202 may be used to measure condensible particulate matter.

(3) For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using a method specified by the Executive Secretary. All particulate captured shall be considered PM_{10} .

(4) The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

(2) The daily and rolling 12-month mass emissions shall be calculated by multiplying the most recent stack test results (lb/hr) by the appropriate hours of operation for each day and for each rolling 12-month period. Within the first 15 days of each month, a new rolling 12-month total shall be calculated using data from the previous 12 months.

II.B.5.a.2

Recordkeeping:

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit. Additionally, hours of operations shall be logged daily. The results of daily and

rolling 12-month emissions shall be maintained in accordance with Provision S.1 in Section 1 of this permit.

II.B.5.a.3

Reporting:

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b

Condition:

Visible emissions shall be no greater than 20 percent. [Authority granted under R307-401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]

II.B.5.b.1

Monitoring:

A visual opacity survey of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.5.b.2

Recordkeeping:

A log of the visual opacity survey(s) shall be maintained in accordance with Provision I.S.1 of this permit. If an opacity determination is indicated, a notation of the determination will be made in the log. All data required by 40 CFR 60, Appendix A, Method 9 shall also be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6

Conditions on NH₄NO₃ Solidification Process Units (Emission unit #9)

II.B.6.a

Condition:

Production of solid Ammonium Nitrate shall be no greater than 14 tons per hour. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]

II.B.6.a.1

Monitoring:

Hourly solid Ammonium Nitrate production rate shall be determined by the following formula:

Solid NH₄NO₃ production on-site during each day (tons) divided by operating hours during each day (hours)

Solid Ammonium Nitrate production shall be determined by examining plant production records.

- II.B.6.a.2 **Recordkeeping:**
Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.
- II.B.6.a.3 **Reporting:**
There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.6.b **Condition:**
Hours of operation shall be no greater than 8640 per 12 month rolling period for each affected emission unit. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]
- II.B.6.b.1 **Monitoring:**
Compliance shall be determined on a rolling 12-month total for each emission unit. The total shall be calculated for each calendar month. Within the first 15 days of each month, a new 12-month total shall be calculated using data from the previous 12 months. The records shall be kept on a daily basis. Hours of operation shall be determined by supervisors monitoring and maintaining of an operations log.
- II.B.6.b.2 **Recordkeeping:**
A log recording all hours of operation for each emission unit shall be maintained. The log shall include the results of required monitoring.
- II.B.6.b.3 **Reporting:**
There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.7 **Conditions on Boiler (Emission unit #10)**
- II.B.7.a **Condition:**
Consumption of natural gas shall be no greater than 69 MMSCF per 12 month rolling period. [Authority granted under R307- 401- 6(1) (BACT); condition originated in DAQE-AN0825004-03]
- II.B.7.a.1 **Monitoring:**
By the 15th day of each month, a new rolling 12-month natural gas consumption total shall be calculated using the appropriate conversion of acf to scf, as recommended by the vendor.
- II.B.7.a.2 **Recordkeeping:**
Records such as gas bills, gas meter readings and calculations, used to determine compliance with the natural gas consumption limit shall be maintained as described in Provision I.S of this permit.
- II.B.7.a.3 **Reporting:**
There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.7.b

Condition:

The permittee shall use only natural gas for fuel. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-AN0825004-03]

II.B.7.b.1

Monitoring:

A log shall be maintained which identifies any time fuel other than NG is used and the fuel type used for each affected equipment.

II.B.7.b.2

Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.7.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C.

Emissions Trading.

(R307-415-6a(10))

Not applicable to this source.

II.D.

Alternative Operating Scenarios.

(R307-415-6a(9))

Not applicable to this source.

Section III: PERMIT SHIELD

The following requirements have been determined to be not applicable to this source in accordance with Provision I.M, Permit Shield:

III.A.

40 CFR Part 60, Subpart G (Standards of Performance for Nitric Acid Plants)

This regulation is not applicable to the Nitric Acid Plant Group (Emission unit #3) because both nitric acid plants were built before the applicability date of August 17, 1971

III.B.

40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units)

This regulation is not applicable to the Boiler (Emission unit #10) because the boiler was installed before the applicability date of June 9, 1989

III.C.

40 CFR Part 51, Appendix P (Minimum Emission Monitoring Requirements)

This regulation is not applicable to the Nitric Acid Plant Group (Emission unit #3) because each nitric acid plant has less than 300 tons per day production capacity, the production capacity being expressed as 100 percent nitric acid

Section IV: ACID RAIN PROVISIONS.

This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-AN0825004-03	dated	March 07, 2003
SIP Section IX.H.1.b.A	dated	July 03, 2002

1. Comment on an item originating in DAQE-AN0825004-02 and SIP Section IX.H.1.b.A. regarding Montecatini Nitric Acid Plant (Unit #1)

Stack test for NO_x: Stack test conducted on 10/6/97 had the following NO_x emission results: 4.47 lbs/hr and 42.76 ppm_{dv}, which were well below the allowable limits of 32.4 lbs/hr and 267 ppm_{dv}. In addition, the NO_x outlet concentration (ppm_{dv}) is also monitored by a continuous NO_x analyzer. Therefore, every two years stack test established by the referenced AO and SIP is sufficient to demonstrate compliance when used in conjunction with the periodic NO_x monitoring system. [Comment last updated on 4/11/2003]

2. Comment on an item originating in DAQE-AN0825004-02 and SIP Section IX.H.1.b.A. regarding Weatherly Nitric Acid Plant (Unit #2)

Stack test for NO_x: Stack test conducted on 12/7/98 had the following NO_x emission results: 3.21 lbs/hr and 46.9 ppm_{dv}, which were well below the allowable limits of 19.4 lbs/hr and 438 ppm_{dv}. In addition, the NO_x outlet concentration (ppm_{dv}) is also monitored by a continuous NO_x analyzer. Therefore, a stack test frequency of three years as established by the referenced AO and SIP is sufficient to demonstrate compliance when used in conjunction with the periodic NO_x monitoring system. [Comment last updated on 4/10/2003]

3. Comment on an item originating in DAQE-AN0825004-02 condition 10. regarding Nitric Acid Plant Group (Unit #3)

Semi-Continuous NO_x Monitoring System: Both nitric acid plants each has one continuous NO_x monitoring analyzer now to monitor the outlet NO_x concentrations (ppm_{dv}). The data generated from the NO_x monitoring system shall be averaged on hourly basis. These NO_x emission data (ppm_{dv}) will be used as periodic monitoring data to demonstrate compliance. The permittee is required to calibrate, maintain, and operate the NO_x monitoring system properly according to the vendor's specification. [Comment last updated on 3/26/2003]

4. Comment on an item originating in DAQE-AN0825004-02 condition 14.B. regarding NH₄NO₃ Solidification Process Units (Unit #9)

12 -Month production rate on NH₄NO₃: The referenced AO condition establishes the following conditions for NH₄NO₃ production:

Hourly Rate: 14 tons/hr

12-Month operation hour: 8640 hours

12-Month production rate: 122,640 tons.

The maximum 12-month production can also be calculated below:

$$\begin{aligned}\text{The maximum 12-Month production rate(tons)} &= 14 \text{ (tons/hr)} \times 8640 \text{ (hr)} \\ &= 120,960 \text{ tons}\end{aligned}$$

Because the maximum 12-month production rate calculated above is less than the established production rate in the referenced AO, compliance with the hourly rate and operating hours requirements will achieve compliance with the 12-month production rate. Therefore, the limitation on the 12-month production rate is redundant and is not included in this permit [Comment last updated on 3/26/2003]

5. Comment on an item originating in DAQE-AN0825004-02 condition 14.A. and 14.C. regarding Nitric Acid Plant Group (Unit #3)

Hourly production rate on HNO₃ and NH₄NO₃: The referenced AO condition establishes an hourly production rate. The hourly rate is monitored by calculating an average hourly rate based on daily production rate in both instances. [Comment last updated on 4/10/2003]

6. Comment on an item originating in SIP Section IX, Part H.1.b.A. regarding Montecatini Nitric Acid Plant (Unit #1)

Daily and annual NO_x emission rate: Condition 1.A has a NO_x emission rate of 0.389 tons/day and 140 tons/year for Montecatini acid plant. AO DAQE-AN0825004-03 has a NO_x emission rate of 32.4 lbs/hour (Condition 11) and rolling 12-month operation hour limit of 8,640 hours (Condition 14.E). The calculations below indicate that the SIP limits are equivalent to the AO limits.

$$\begin{aligned}0.389 \text{ tons/day (SIP)} &= (32.4 \text{ lb/hour (AO)} \times 24 \text{ hours/day}) / 2,000 \text{ lbs/ton, and} \\ 140 \text{ tons/year (SIP)} &= (32.4 \text{ lb/hour (AO)} \times 8640 \text{ hours/year (AO)}) / 2,000 \text{ lbs/ton.}\end{aligned}$$

However, the average time for the AO limits is shorter than for the SIP limits, therefore, the AO limits are more stringent than the SIP limits. Based on the discussions above, the SIP limits are not carried to this permit. [Comment last updated on 4/11/2003]

7. Comment on an item originating in SIP Section IX, Part H.1.b.A. regarding Weatherly Nitric Acid Plant (Unit #2)

Daily and annual NO_x emission rate: Condition 1.A has a NO_x emission rate of 0.233 tons/day and 83.8 tons/year for Weatherly acid plant. AO DAQE-AN0825004-03 has a NO_x emission rate of 19.4 lbs/hour (Condition 11) and rolling 12-month operation hour limit of 8,640 hours (Condition 14.E). The calculations below indicate that the SIP limits are equivalent to the AO limits.

$$\begin{aligned}0.233 \text{ tons/day (SIP)} &= (19.4 \text{ lb/hour (AO)} \times 24 \text{ hours/day}) / 2,000 \text{ lbs/ton, and} \\ 83.8 \text{ tons/year (SIP)} &= (19.4 \text{ lb/hour (AO)} \times 8640 \text{ hours/year (AO)}) / 2,000 \text{ lbs/ton.}\end{aligned}$$

However, the average time for the AO limits is shorter than for the SIP limits, therefore, the AO limits are more stringent than the SIP limits. Based on the discussions above, the SIP limits are not carried to this permit. [Comment last updated on 4/11/2003]